1. A manufacturing equipment scheduling system for controlling run sequences of product lots to minimize low utilization rates of units of manufacturing processing equipment employed in fabricating said product lots, comprising;

a product lot sequence controller in communication with a product lot dispatch system to receive priority information of the product lots dispatched for fabrication, and in communication with an operations controller to establish an order in which said product lots are processed by units of said processing equipment, said product lot sequence controller establishing said order by performing the steps of:

receiving a dispatch order for at least one current product lot,

determining a priority of said current product lot,

if said current product lot has a high priority, determining if a previous product lot remains in a selected unit of processing equipment,

if said previous product lot remains in the selected unit processing equipment, determining if said previous product lot is has a normal priority;

if said previous product lot has a normal priority, removing said product lot from said selected unit of processing equipment,

processing the product lot with the high priority; and

upon completion of processing said current product lot with high priority, continuing processing the previous product.

2. The manufacturing equipment scheduling system of claim 1 wherein the product lot sequence controller further establishing said order by performing the steps of:

if said current product lot has the normal priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, continuing processing said previous product to completion; and

processing the current product lot with the normal priority.

3. The manufacturing equipment scheduling system of claim 1 wherein the product lot sequence controller further establishing said order by performing the steps of:

if said current product lot has the high priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, determining if said previous product lot has a high priority;

if said previous product lot has the high priority, continuing processing said previous product lot in said selected unit of processing equipment; and

upon completion of said previous product lot, processing the current product lot.

4. The manufacturing equipment scheduling system of claim 1 wherein performing the step of removing said product lot from said selected unit of processing equipment includes the steps of:

commanding said selected unit of processing to cease processing said previous lot;

recording status information of all pieces of product within said product lot, and

requesting said selected unit of processing equipment to return said previous product lot to a staging location.

5. The manufacturing equipment scheduling system of claim 1 wherein performing the step of continuing processing the previous product includes the steps of:

examining status information of all pieces of product within said product lot,

requesting said selected unit of processing equipment to acquire said previous product lot from the staging location; and

commanding said selected unit of processing to continue processing said previous lot.

6. The manufacturing equipment scheduling system of claim 1 further comprising:

a messaging facility connected to communicate messages between said product lot sequence controller, said units of said processing equipment, and product lot dispatch system.

7. The manufacturing equipment scheduling system of claim 1 wherein said product lots are integrated circuit substrates and said units of said processing equipment are integrated circuit fabrication equipment.

8. A method for scheduling manufacturing equipment to control run sequences of product lots to minimize low utilization rates of units of manufacturing processing equipment employed in fabricating said product lots, comprising;

communicating with a product lot dispatch system to receive priority information of the product lots dispatched for fabrication;

communicating with an operations controller to establish an order in which said product lots are processed by units of said processing equipment; and

establishing said order by performing the steps of:

receiving a dispatch order for at least one current product lot,

determining a priority of said current product lot,

if said current product lot has a high priority, determining if a previous product lot remains in a selected unit of processing equipment,

if said previous product lot remains in the selected unit processing equipment, determining if said previous product lot is has a normal priority;

if said previous product lot has a normal priority, removing said product lot from said selected unit of processing equipment,

processing the product lot with the high priority; and

upon completion of processing said current product lot with high priority, continuing processing the previous product.

9. The method of claim 8 wherein establishing said order further performs the steps of:

if said current product lot has the normal priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, continuing processing said previous product to completion; and

processing the current product lot with the normal priority.

10. The method of claim 8 wherein establishing said order further performs the steps of:

if said current product lot has the high priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, determining if said previous product lot has a high priority;

if said previous product lot has the high priority, continuing processing said previous product lot in said selected unit of processing equipment; and

upon completion of said previous product lot, processing the current product lot.

11. The method of claim 8 wherein performing the step of removing said product lot from said selected unit of processing equipment includes the steps of:

commanding said selected unit of processing to cease processing said previous lot;

recording status information of all pieces of product within said product lot, and

requesting said selected unit of processing equipment to return said previous product lot to a staging location.

12. The method of claim 8 wherein performing the step of continuing processing the previous product includes the steps of:

examining status information of all pieces of product within said product lot,

requesting said selected unit of processing equipment to acquire said previous product lot from the staging location; and

commanding said selected unit of processing to continue processing said previous lot.

13. The method of claim 8 wherein communicating with a product lot dispatch system is performed by the step of:

transferring messages to and from said product lot dispatch system.

14. The method of claim 8 wherein communicating with an operations controller is performed by the step of:

transferring messages to and from operations controller.

15. The method of claim 8 wherein said product lots are integrated circuit substrates and said units of said processing equipment are integrated circuit fabrication equipment.

16. An apparatus for scheduling manufacturing equipment to control run sequences of product lots to minimize low utilization rates of units of manufacturing processing equipment employed in fabricating said product lots, comprising;

means for communicating with a product lot dispatch system to receive priority information of the product lots dispatched for fabrication;

means for communicating with an operations controller to establish an order in which said product lots are processed by units of said processing equipment; and

means for establishing said order including:

means for receiving a dispatch order for at least one current product lot,

means for determining a priority of said current product lot,

means for determining if a previous product lot remains in a selected unit of processing equipment, if said current product lot has a high priority,

means for determining if said previous product lot is has a normal priority, if said previous product lot remains in the selected unit that schedules manufacturing equipment to control run sequences of product lots to minimize low utilization rates of

units of manufacturing processing equipment processing equipment;

means for removing said product lot from said selected unit of processing equipment, if said previous product lot has a normal priority,

processing the product lot with the high priority; and

means for continuing processing the previous product, upon completion of processing said current product lot with high priority.

17. The apparatus of claim 16 wherein means for establishing said order further includes:

means for determining if the previous product lot remains in the selected unit of processing equipment, if said current product lot has the normal priority;

means for continuing processing said previous product to completion, if said previous product lot remains in the selected unit of processing equipment; and

means for processing the current product lot with the normal priority.

18. The apparatus of claim 16 wherein means for establishing said order further includes:

means for determining if the previous product lot remains in the selected unit of processing equipment, if said current product lot has the high priority;

means for determining if said previous product lot has a high priority;, if said previous product lot remains in the selected unit of processing equipment;

means for continuing processing said previous product lot in said selected unit of processing equipment, if said previous product lot has the high priority; and

means for processing the current product lot, upon completion of said previous product lot.

19. The apparatus of claim 16 wherein means for removing said product lot from said selected unit of processing equipment comprises:

means for commanding said selected unit of processing to cease processing said previous lot;

means for recording status information of all pieces of product within said product lot, and

means for requesting said selected unit of processing equipment to return said previous product lot to a staging location.

20. The apparatus of claim 16 wherein means for continuing processing the previous product comprises:

means for examining status information of all pieces of product within said product lot,

means for requesting said selected unit of processing equipment to acquire said previous product lot from the staging location; and

means for commanding said selected unit of processing to continue processing said previous lot.

21. The apparatus of claim 16 wherein means for communicating with a product lot dispatch system comprises:

means for transferring messages to and from said product lot dispatch system.

22. The apparatus of claim 16 wherein means for communicating with an operations controller includes:

means for transferring messages to and from operations controller.

23. The apparatus of claim 16 wherein said product lots are integrated circuit substrates and said units of said processing equipment are integrated circuit fabrication equipment.

24. A computer integrated manufacturing system that executes a program process for controlling run sequences of product lots to minimize low utilization rates of processing equipment manufacturing unit employed in fabricating said product lots, the program process comprising the steps of:

communicating with a product lot dispatch system to receive priority information of the product lots dispatched for fabrication;

communicating with an operations controller to establish an order in which said product lots are processed by units of said processing equipment; and

establishing said order by performing the steps of:

receiving a dispatch order for at least one current product lot,

determining a priority of said current product lot,

if said current product lot has a high priority, determining if a previous product lot remains in a selected unit of processing equipment,

if said previous product lot remains in the selected unit processing equipment, determining if said previous product lot is has a normal priority;

if said previous product lot has a normal priority, removing said product lot from said selected unit of processing equipment,

processing the product lot with the high priority; and

upon completion of processing said current product lot with high priority, continuing processing the previous product.

25. The computer integrated manufacturing system of claim 24 wherein the step of said program process for establishing said order further performs the steps of:

if said current product lot has the normal priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, continuing processing said previous product to completion; and

processing the current product lot with the normal priority.

26. The computer integrated manufacturing system of claim 24 wherein the step of said program process for establishing said order further performs the steps of:

if said current product lot has the high priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, determining if said previous product lot has a high priority;

if said previous product lot has the high priority, continuing processing said previous product lot in said selected unit of processing equipment; and

upon completion of said previous product lot, processing the current product lot.

27. The computer integrated manufacturing system of claim 24 wherein the step of said program process for performing the step of removing said product lot from said selected unit of processing equipment includes the steps of:

commanding said selected unit of processing to cease processing said previous lot;

recording status information of all pieces of product within said product lot, and

requesting said selected unit of processing equipment to return said previous product lot to a staging location.

28. The computer integrated manufacturing system of claim 24 wherein the step of said program process for performing the step of continuing processing the previous product includes the steps of:

examining status information of all pieces of product within said product lot,

requesting said selected unit of processing equipment to acquire said previous product lot from the staging location; and

commanding said selected unit of processing to continue processing said previous lot.

29. The computer integrated manufacturing system of claim 24 wherein the step of said program process for communicating with a product lot dispatch system

transferring messages to and from said product lot dispatch system.

30. The computer integrated manufacturing system of claim 24 wherein the step of said program process for communicating with an operations controller is performed by the step of:

transferring messages to and from operations controller.

31. The computer integrated manufacturing system of claim 24 wherein said product lots are integrated circuit substrates and said units of said processing equipment are integrated circuit fabrication equipment.

32. A medium for retaining a computer program which, when implemented by a computing system that executes a program process for controlling run sequences of product lots to minimize low utilization rates of processing equipment manufacturing unit employed in fabricating said product lots, the program process comprising the steps of:

communicating with a product lot dispatch system to receive priority information of the product lots dispatched for fabrication;

communicating with an operations controller to establish an order in which said product lots are processed by units of said processing equipment; and

establishing said order by performing the steps of:

receiving a dispatch order for at least one current product lot,

determining a priority of said current product lot,

if said current product lot has a high priority, determining if a previous product lot remains in a selected unit of processing equipment,

if said previous product lot remains in the selected unit processing equipment, determining if said previous product lot is has a normal priority;

if said previous product lot has a normal priority, removing said product lot from said selected unit of processing equipment,

processing the product lot with the high priority; and

upon completion of processing said current product lot with high priority, continuing processing the previous product.

33. The medium of claim 32 wherein the step of said program process for establishing said order further performs the steps of:

if said current product lot has the normal priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, continuing processing said previous product to completion; and

processing the current product lot with the normal priority.

34. The medium of claim 32 wherein the step of said program process for establishing said order further performs the steps of:

if said current product lot has the high priority, determining if the previous product lot remains in the selected unit of processing equipment;

if said previous product lot remains in the selected unit of processing equipment, determining if said previous product lot has a high priority;

if said previous product lot has the high priority, continuing processing said previous product lot in said selected unit of processing equipment; and

upon completion of said previous product lot, processing the current product lot.

35. The medium of claim 32 wherein the step of said program process for performing the step of removing said product lot from said selected unit of processing equipment includes the steps of:

commanding said selected unit of processing to cease processing said previous lot;

recording status information of all pieces of product within said product lot, and

requesting said selected unit of processing equipment to return said previous product lot to a staging location.

36. The medium of claim 32 wherein the step of said program process for performing the step of continuing processing the previous product includes the steps of:

examining status information of all pieces of product within said product lot,

requesting said selected unit of processing equipment to acquire said previous product lot from the staging location; and

commanding said selected unit of processing to continue processing said previous lot.

37. The medium of claim 32 wherein the step of said program process for communicating with a product lot dispatch system is performed by the step of:

transferring messages to and from said product lot dispatch system.

38. The medium of claim 32 wherein the step of said program process for communicating with an operations controller is performed by the step of:

transferring messages to and from operations controller.

39. The medium of claim 32 wherein said product lots are integrated circuit substrates and said units of said processing equipment are integrated circuit fabrication equipment.